July 15, 2005

Mr. Magdy Baiady California Regional Water Quality Control Board Los Angeles Region 320 West 4th Street, Suite 200 Los Angeles, California 90013

Subject:

Quarterly Report for the Second Quarter 2005

Mobil Station 18LBF 19248 Victory Boulevard Reseda, California

CRWQCB Case No. 913350834A

Mr. Baiady:

cc:

At the request of ExxonMobil Oil Corporation (ExxonMobil), Environmental Resolutions, Inc. is submitting the Second Quarter 2005 ExxonMobil Quarterly Report for the above-referenced site. The format utilized for the report consolidates groundwater sampling (where applicable), Title 23, Subchapter 16 reporting and consultant progress updates for ExxonMobil into one summary report.

Please call me at (949) 457-7999 if you have any questions.

Ms. Jeneé Briggs, ExxonMobil

Sincerely,

Environmental Resettations, Inc.

Patrick J. Toelkes Project Manager P.G. 7155

P.G. / I

QUARTERLY GROUNDWATER MONITORING REPORT SUMMARY SHEET SECOND QUARTER 2005

Mobil Station 18LBF, 19248 Victory Boulevard, Reseda, California ERI 3236

SITE INFORMATION:									
Responsible Party / Contact:		ExxonMobil Oil Corporation / Ms. Jeneé B	riggs (310) 212-2	904					
Responsible Party Address:		3700 West 190th Street, TPT2-4, Torrand	e, California 9050)4					
Station / Site ID:		18LBF		-					
Current Site Use:		Operating Mobil gasoline service station							
Global ID:		T0603702234							
Lead Regulatory Agency/Case#/Case Worker:		CRWQCB/ 913350834A/ Magdy Baiady (2	213) 576-6699						
Date of Most Recent Regulatory Letter:		December 29, 2004							
Primary Consultant / Project Manager:		Environmental Resolutions, Inc. / Mr. Patr	ick J. Toelkes (94	9) 457-7999					
Well Monitoring Contractor:		Environmental Resolutions, Inc.							
Site Monitoring Frequency:		Quarterly							
Well(s) and/or Subsurface Water Within 2,000 ft.:		Los Angeles River (500 ft north)							
Number of Groundwater Wells On Site:		4							
Number of Groundwater Wells Off Site:		None							
Phase of Vadose Investigation:		Assessed							
Phase of Groundwater Investigation:		Monitoring and sampling/delineation							
Nature of Impact:		Gasoline							
SITE HYDROLOGY									
Number of Water Zones:		1		*					
Depth to Groundwater Range (ft.)		14.79 - 15.56							
Potentiometric Surface Elevation Range (ft-MSL):		726.29 - 727.29							
Qtrly Change in Avg. Groundwater Elevation (ft):		0.30 ft increase							
Flow Direction/Hydraulic Gradient (ft/ft):		Northeast / 0.01 ft/ft							
FIELD ACTIVITY (CURRENT QUARTER):			Wells w	rith LPH:					
			Well	Feet					
Groundwater Monitoring Date:		04/18/05	None	N/A					
Groundwater Wells Gauged:		4 .							
Groundwater Wells Sampled:		4							
Sampling Method:		Purge							
Gallons of Groundwater Purged:		162							
Treatment Method / Disposal Facility:		Crosby & Overton							
Analysis:		TPHg by EPA Cal-LUFT Method; BTEX at 8260B	nd fuel oxygenate	s by EPA Method					
GROUNDWATER CONDITIONS:		·		_					
No. of wells with Detectable Benzene:	3	Benzene Range (ug/l):		<1.00 - 138					
No. of wells with Detectable TPHg:	4	TPHg Range (ug/l):		285 - 5,020					
	4	MTBE Range (ug/l):	399 - 2,920						
No. of wells with Detectable TBA:	4	TBA Range (ug/l):		684 - 15,600					
ADDITIONAL INFORMATION:									

ADDITIONAL INFORMATION:

Quarterly groundwater monitoring began at the site in the third quarter 2003.

WORK PERFORMED THIS QUARTER:

Groundwater monitoring and sampling of 4 wells.

QUARTERLY GROUNDWATER MONITORING REPORT SUMMARY SHEET SECOND QUARTER 2005

Mobil Station 18LBF, 19248 Victory Boulevard, Reseda, California ERI 3236

TREND ANALYSIS:

Groundwater elevations increased by an average of 0.30 feet since the first quarter 2005.

Dissolved phase benzene is localized to the vicinity of the former USTs with the maximum concentration detected in groundwater monitoring well MW04 at 138 micrograms per liter (µg/l).

Dissolved phase MTBE was detected in each of the monitoring wells. Well MW04 had the highest concentration of MTBE at 2,920 µg/l.

Dissolved phase TBA was detected in each of the monitoring wells. Groundwater monitoring well MW01 had the highest concentration of TBA at 15,600 µg/l.

ACTIVITIES PERFORMED THIS QUARTER:

Conducted quarterly groundwater monitoring and sampling.

Prepared and submitted quarterly groundwater monitoring report for first quarter 2005 to the CRWQCB.

ACTIVITIES PROPOSED NEXT QUARTER:

Conduct quarterly groundwater monitoring and sampling.

Prepare and submit the quarterly groundwater monitoring report for second quarter 2005 to the CRWQCB.

Submit a work plan for feasibility testing and the installation of four off-site groundwater monitoring wells to the CRWQCB.

Compile and submit additional ownership and investigation information requested by the CRWQCB.

For any questions, please call Ms. Jeneé Briggs with ExxonMobil at (310) 212-2904 or Mr. Patrick J. Toelkes with ERI at (949) 457-7999.

Respectfully submitted,

Patrick J. Torkes

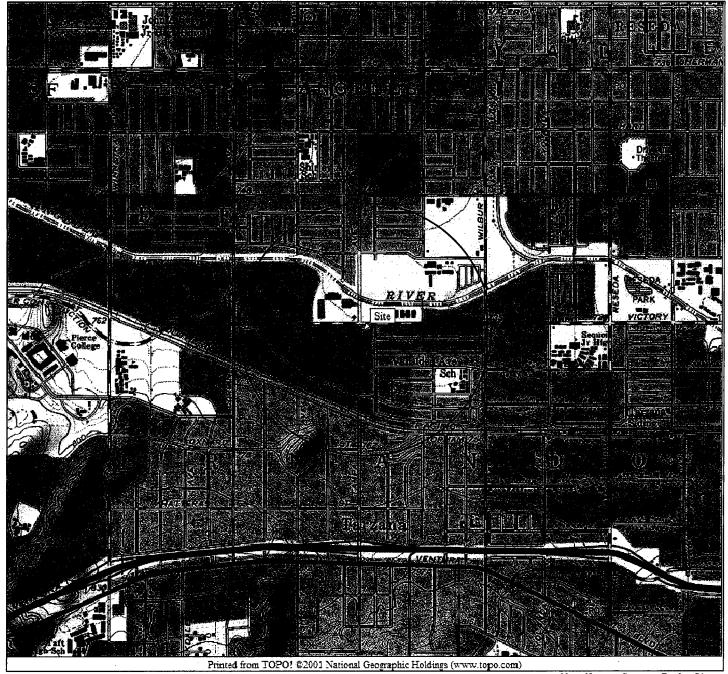
P.G. 7155

ATTACHED:

Site Location Map (Plate 1)

allkes

- Site Vicinity Map (Plate 2)
- Groundwater Elevation Contour Map 04/18/05 (Plate 3)
- Benzene Groundwater Isopleth Concentration Map 04/18/05 (Plate 4)
- MTBE Groundwater Isopleth Concentration Map 04/18/05 (Plate 5)
- Groundwater Monitoring and Sampling Schedule and Well Construction Details (Table 1)
- Water Level Measurements and Groundwater Analyses (Table 2)
- Cumulative Water Level Measurements and Groundwater Analyses (Table 3)
- Laboratory Report and Chain-of-Custody Record
- Groundwater Sampling Field Log
- ERI Groundwater Monitoring and Sampling Field Protocol
- Non-Hazardous Waste Manifest for First Quarter 2005



FN 3236TOPO

Map Name: Canoga Park, CA Version: 1967

EXPLANATION



1/2-mile radius circle

O.5 1 SOURCE: Modified from a map provided by National Geographic's TOPO!

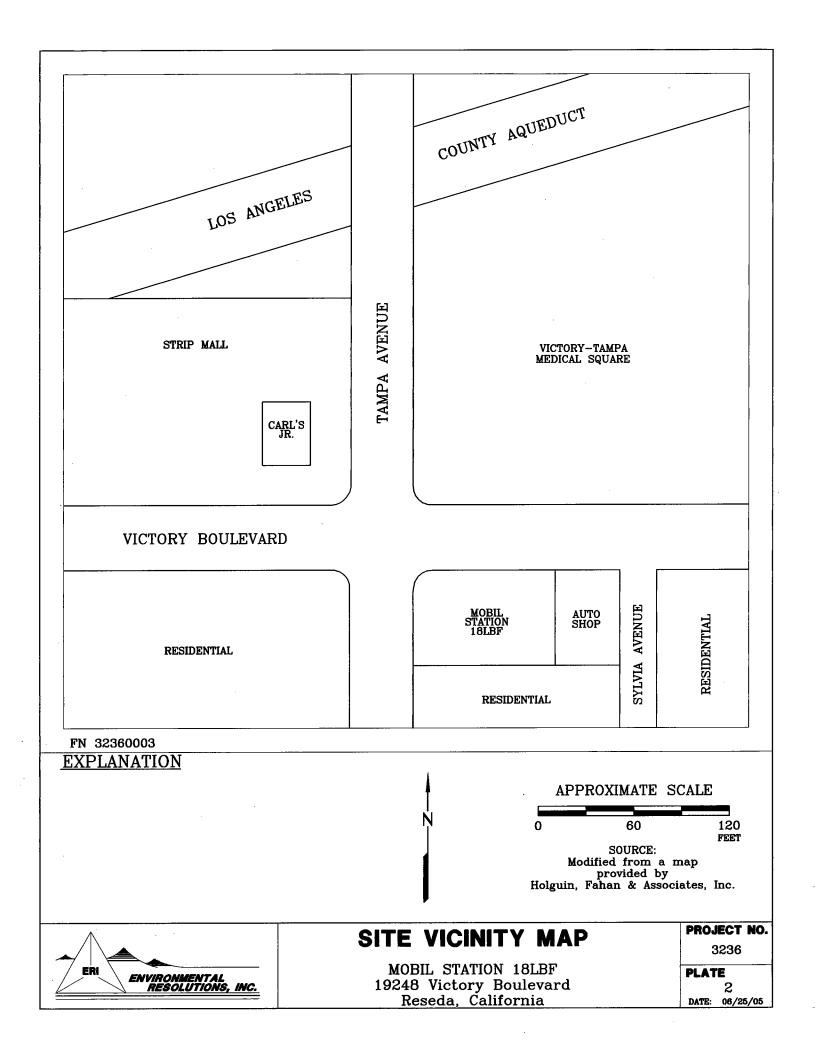


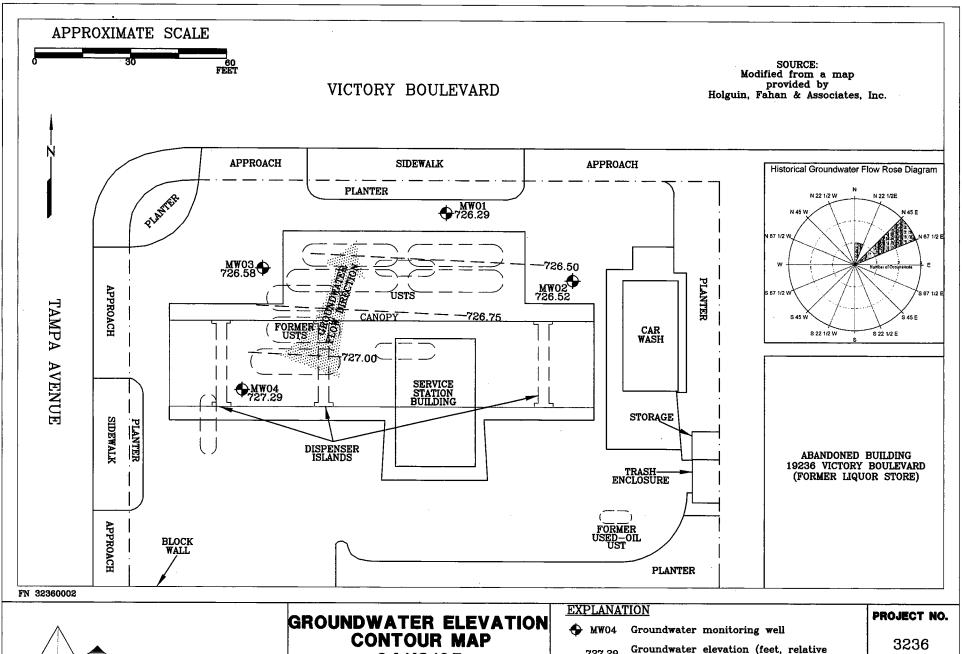
SITE LOCATION MAP

MOBIL STATION 18LBF 19248 Victory Boulevard Reseda, California PROJECT NO.

3236

PLATE 1







04/18/05

MOBIL STATION 18LBF 19248 Victory Boulevard Reseda, California

727.29 to mean sea level)

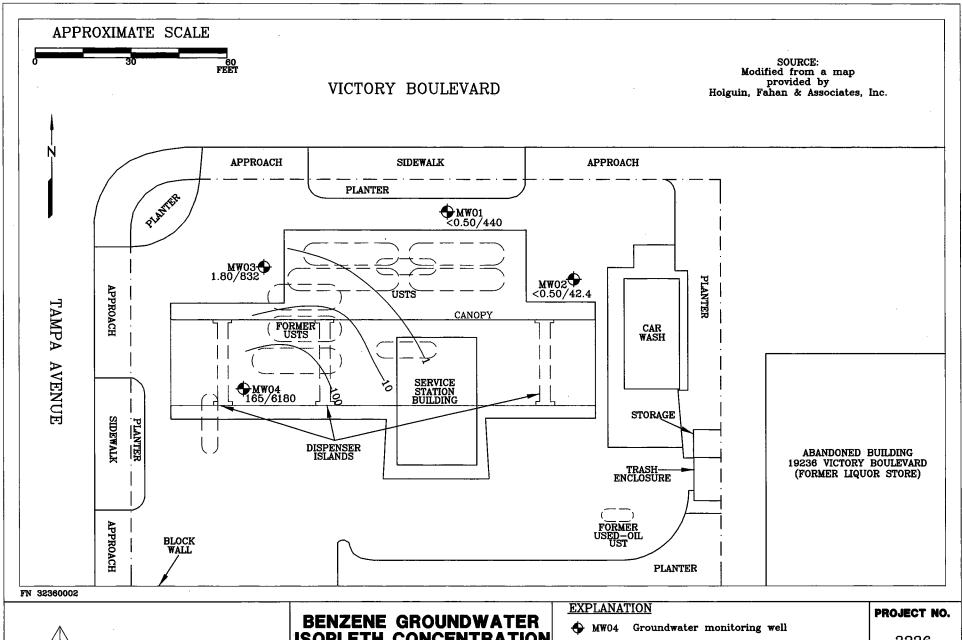
Line of equal groundwater elevation

Former dispenser island

PLATE

3

DATE: 08/25/05





ISOPLETH CONCENTRATION MAP - 05/19/04

MOBIL STATION 18LBF 19248 Victory Boulevard Reseda, California

Former dispenser island

165/6180 Benzene/TPHg concentration in ug/l

Line of equal benzene concentration

< 0.50

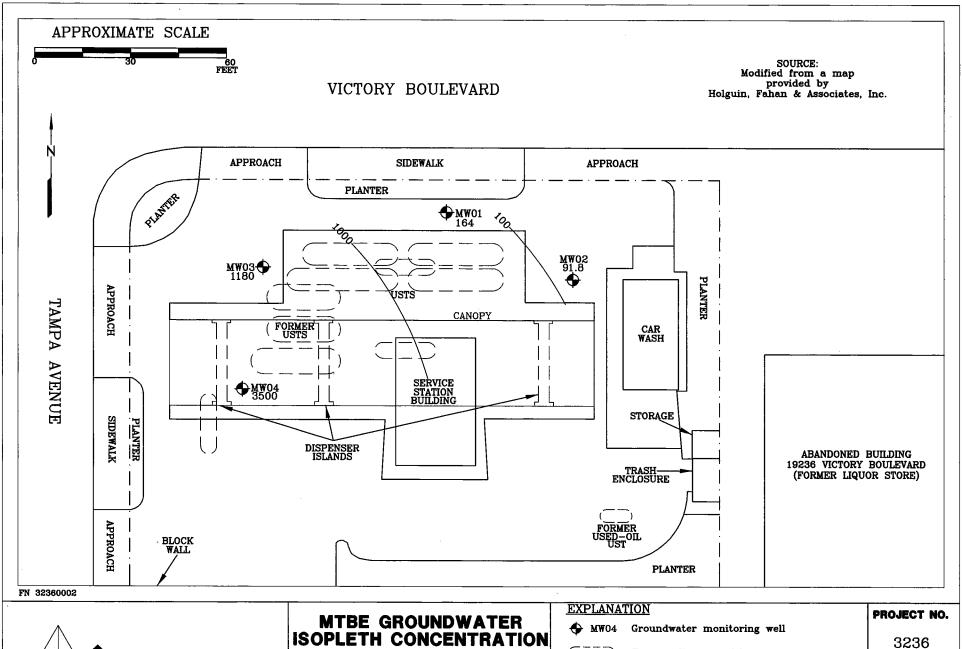
Less than the stated laboratory reporting limit

3236

PLATE

4

DATE: 06/25/05





ISOPLETH CONCENTRATION MAP - 04/18/05

MOBIL STATION 18LBF 19248 Victory Boulevard Reseda, California

EXPLANA'	<u>rion</u>	PROJECT NO.
♦ MW04	Groundwater monitoring well	0000
$\subset \subset \subset \supset$	Former dispenser island	3236
2920	MTBE concentration in ug/l	PLATE
	Line of equal MTBE concentration	5
		DATE: 06/25/05

TABLE 1

GROUNDWATER MONITORING AND SAMPLING SCHEDULE AND WELL CONSTRUCTION DETAILS

MOBIL STATION 18LBF 19248 VICTORY BOULEVARD RESEDA, CALIFORNIA

ERI 3236

CURRENT	CURRENT MONITORING WELL SAMPLING/ACTIVITY SCHEDULE											
WELL	WELL	FREQUENCY	FREQUENCY									
NUMBER	ACTIVITY	OF GAUGING	OF SAMPLING									
MW01	Р	quarterly	quarterly									
MW02	Р	quarterly	quarterly									
MW03	Р	quarterly	quarterly									
MW04	Р	quarterly	quarterly									

NP = no-purge

P = purge

	WELL CONSTRUCTION INFORMATION											
WELL	INSTALL	CASING/BOREHOLE	SCREENED	TOTAL								
[ID	DATE	DIAMETER	INTERVAL (ft)	DEPTH (ft)								
MW01	09/17-18/03	4"/10"	10-39.5	40								
MW02	09/18/03	4"/10"	10-39.5	40								
MW03	09/19/03	4"/10"	10-39.5	40								
MW04	09/19/03	4"/10"	10-39.5	40								

TOTAL DEPTH = depth of boring

TABLE 2

WATER LEVEL MEASUREMENTS AND GROUNDWATER ANALYSES

MOBIL STATION 18LBF 19248 VICTORY BOULEVARD RESEDA, CALIFORNIA

ERI 3236

MW01	ELEV:	741.85						
DATE	GW DEPTH	GW ELEV.	В	Т	E	X	TPHg	MTBE
04/18/05	15.56	726.29	<0.50	<0.50	<0.50	0.63	440	164
MW02	ELEV:	741.98						
DATE	GW DEPTH	GW ELEV.						
04/18/05	15.46	726.52	<0.50	<0.50	0.60	0.71	92.4	91.8
MW03	ELEV:	741.75						
DATE	GW DEPTH	GW ELEV.						
04/18/05	15.17	726.58	1.80	<0.50	6.30	5.50	834	1180
MW04	ELEV:	742.08						
DATE	GW DEPTH	GW ELEV.						
04/18/05	14.79	727.29	165	300	200	1080	6180	3500

EXPLANATION:

Results reported in micrograms per liter (ug/l).

GW = groundwater

ELEV = elevation

B = benzene; T = toluene; E = ethylbenzene; X = total xylene isomers; TPHg = total petroleum hydrocarbons as gasoline

Methyl tertiary butyl ether (MTBE) analyzed by EPA Method 8260B.

<0.50 = not detected at or above the stated laboratory reporting limit

TABLE 3 CUMULATIVE WATER LEVEL MEASUREMENTS AND GROUNDWATER ANALYSES MOBIL STATION 18LBF 19248 VICTORY BOULEVARD

RESEDA, CALIFORNIA

ERI 3236

				******** ** * **** **** * * * ****												
Date	Well Elev	GW Depth	GW Elev	LPH	Benzene (ug/l)	Toluene (ug/l)	Ethyl- benzene (ug/l)	Xylenes (ug/l)	TPHg (ug/l)	MTBE (ug/l)	DIPE (ug/l)	ETBE (ug/l)	TAME (ug/l)	TBA (ug/l)	Ethanol (ug/l)	Methanol (ug/l)
Field Point	MW01												***************************************			
9/30/2003	741.85	18.60	723.25	no	<0.50	0.30J	<0.50	<0.50	1120	103	<0.50	<0.50	<0.50	536		
11/5/2003	741.85	18.77	723.08	no	<0.50	<0.50	<0.50	<0.50	141	125	<0.50	0.30 J	<0.50	1970		
2/4/2004	741.85	18.80	723.05	no	<0.50	<0.50	<0.50	<0.50	<50.0	581	<0.50	1.70J	<0.50	16300		
5/19/2004	741.85	18.51	723.34	no	<1.00	<1.00	<1.00	<1.00	2430	3480	<1.00	8.20	2.90	100000		
7/29/2004	741.85	19.07	722.78	no	<1.00	<1.00	<1.00	<1.00	537	355	<1.00	2.70	<1.00	34400		
10/18/2004	741.85	19.26	722.59	no	<1.00	<1.00	<1.00	<1.00	1470	635	<1.00	8.80	<1.00	39200		
1/26/2005	741.85	15.86	725.99	no	<1.00	<1.00	<1.00	<1.00	998	947	<1.00	8.00	<1.00	117000	<1000	20900
4/18/2005	741.85	15.56	726.29	no	<0.50	<0.50	<0.50	0.63	440	164	<1.00	1.20	<1.00	15600	<200	
Field Point	MW02			1 21						 						
9/30/2003	741.98	18.77	723.21	no	<0.50	0.30J	<0.50	<0.50	98.1	39.9	<0.50	<0.50	<0.50	.327		
11/5/2003	741.98	18.90	723.08	no	<0.50	<0.50	<0.50	<0.50	181	192	<0.50	<0.50	<0.50	916	**	
2/4/2004	741.98	18.87	723.11	no	<0.50	<0.50	<0.50	<0.50	1340	375	<0.50	<0.50	<0.50	1330		
5/19/2004	741.98	18.62	723.36	no	<1.00	<1.00	<1.00	<1.00	186	222	<1.00	<1.00	<1.00	872		
7/29/2004	741.98	19.20	722.78	no	<1.00	<1.00	<1.00	<1.00	1120	1330	<1.00	2.10	1.00	35700		
10/18/2004	741.98	19.43	722.55	no	<1.00	<1.00	<1.00	<1.00	881	725	<1.00	<1.00	1.40	9100		
1/26/2005	741.98	15.78	726.20	no	1.00	2.20	<1.00	<1.00	478	806	<1.00	1.20	<1.00	8360	<1000	<10000
4/18/2005	741.98	15.46	726.52	no	<0.50	<0.50	0.60	0.71	92.4	91.8	<1.00	<1.00	<1.00	684	<200	
Field Point	MW03						······································	·	1	<u></u>						
9/30/2003	741.75	18.20	723.55	no	29.5	5.80	2.80	260	5910	5570	<0.50	0.60	10.2	2340		
11/5/2003	741.75	18.38	723.37	no	1.00	<0.50	0.30J	2.00	339	449	<0.50	<0.50	0.50	165		
2/4/2004	741.75	18.42	723.33	no	1.40	<0.50	<0.50	<0.50	3590	8650	<0.50	0.30J	7.10	971		

TABLE 3 CUMULATIVE WATER LEVEL MEASUREMENTS AND GROUNDWATER ANALYSES MOBIL STATION 18LBF 19248 VICTORY BOULEVARD RESEDA, CALIFORNIA

ERI 3236

Date	Well Elev	GW Depth	GW Elev	LPH	Benzene (ug/l)	Toluene (ug/l)	Ethyl- benzene (ug/l)	Xylenes (ug/l)	TPHg (ug/l)	MTBE (ug/l)	DIPE (ug/l)	ETBE (ug/l)	TAME (ug/l)	TBA (ug/l)	Ethanol (ug/l)	Methanol (ug/l)
5/19/2004	741.75	18.11	723.64	no	15.5	<1.00	48.2	1.50	12900	23400	<1.00	<1.00	33.0	14400		
7/29/2004	741.75	18.63	723.12	no	<1.00	2.20	2.50	8.80	3820	4660	<1.00	<1.00	6.40	838		
10/18/2004	741.75	18.83	722.92	no	1.60	<1.00	4.70	<1.00	2530	2110	<1.00	<1.00	4.90	810	•	
1/26/2005	741.75	15.42	726.33	no	1.10	1.50	<1.00	<1.00	285	399	<1.00	<1.00	<1.00	113	<1000	<10000
4/18/2005	741.75	15.17	726.58	no	1.80	<0.50	6.30	5.50	834	1180	<1.00	<1.00	2.30	1350	<200	
Field Point	MW04							***								
9/30/2003	742.08	18.06	724.02	no	44.0	58.0	62.0	1310	8380	406	<10.0	<10.0	<10.0	78.0J		
11/5/2003	742.08	18.31	723.77	no	32.8	47.6	22.6	366	2140	838	<0.50	<0.50	0.80	103		
2/4/2004	742.08	18.36	723.72	no	78.7	37.1	85.8	246	1760	1520	<0.50	0.30J	3.80	402		
5/19/2004	742.08	17.97	724.11	no	1780	2030	2020	7220	71800	70000	<50.0	<50.0	65.0	8300		
7/29/2004	742.08	18.57	723.51	no	109	150	143	410	4870	2580	<1.00	<1.00	3.00	340		
10/18/2004	742.08	18.80	723.28	no	67.0	123	67.8	325	3190	1430	<1.00	<1.00	2.50	623		
1/26/2005	742.08	15.12	726.96	no	138	222	175	707	5020	2920	<1.00	<1.00	3.90	231	<1000	<10000
4/18/2005	742.08	14.79	727.29	no	165	300	200	1080	6180	3500	<1.00	<1.00	3.30	981	<200	
Field Point	TRIP BLANK	<u> </u>	······································	l l			·									
9/30/2003				no	<0.50	<0.50	<0.50	<0.50	<50.0	<0.50	<0.50	<0.50	<0.50	<10.0		
11/5/2003				no	<0.50	<0.50	<0.50	<0.50	<50.0	<0.50	<0.50	<0.50	<0.50	<10.0		
2/4/2004				no	<0.50	0.30J	<0.50	<0.50	<50.0	<0.50	<0.50	<0.50	<0.50	<10.0		
5/19/2004				no	<1.00	<1.00	<1.00	<1.00	<50.0	<2.00	<1.00	<1.00	<1.00	<10.0		
7/29/2004				no	<1.00	<1.00	<1.00	<1.00	<50.0	<2.00	<1.00	<1.00	<1.00	<10.0	•	
10/18/2004				no	<1.00	<1.00	<1.00	<1.00	<50.0	<2.00	<1.00	<1.00	<1.00	<10.0		
1/26/2005				no	<1.00	<1.00	<1.00	<1.00	<50.0	<2.00	<1.00	<1.00	1.30	<10.0	<1000	<10000

TABLE 3

CUMULATIVE WATER LEVEL MEASUREMENTS AND GROUNDWATER ANALYSES

MOBIL STATION 18LBF

19248 VICTORY BOULEVARD

RESEDA, CALIFORNIA

ERI 3236

Date	Well Elev	GW Depth	GW Elev	LPH	Benzene (ug/l)	Toluene (ug/l)	Ethyl- benzene (ug/l)	Xylenes (ug/l)	TPHg (ug/l)	MTBE (ug/l)	DIPE (ug/l)	ETBE (ug/l)	TAME (ug/l)	TBA (ug/l)	Ethanol (ug/l)	Methanol (ug/l)
4/18/2005				no 	<0.50	<0.50	<0.50	0.75	<50.0	<1.00	<1.00	<1.00	<1.00	<10.0		

TABLE 3

CUMULATIVE WATER LEVEL MEASUREMENTS AND GROUNDWATER ANALYSES MOBIL STATION 18LBF 19248 VICTORY BOULEVARD RESEDA, CALIFORNIA ERI 3236

Explanation:
ELEV = elevation
EPA = Environmental Protection Agency
GW = groundwater
DIPE = di-isopropyl ether
ETBE = ethyl tertiary butyl ether
TAME = tertiary amyl methyl ether
TBA = tertiary butyl alcohol
TPHg = total petroleum hydrocarbons as gasoline
MTBE = methyl tertiary butyl ether
MTBE analyzed by EPA Method 82620B.
LPH = liquid phase hydrocarbons (thickness measured in feet)
<10000 = not detected at or above stated laboratory reporting limit
ug/l = micrograms per liter



P1 (1236

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5/19/05

ENVIRONMENTAL RESOLUTIONS, INC 10229
PAT TOELKES
20372 NORTH SEA CIRCLE
LAKE FOREST, CA 92630

This report includes the analytical certificates of analysis for all samples listed below. These samples relate to your project identified below:

Project Name: EXXONMOBIL 18-LBF
Project Number: ERI 3236 13.

Laboratory Project Number: 414012.

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. Any QC recoveries outside laboratory control limits are flagged individually with an #. Sample specific comments and quality control statements are included in the Laboratory notes section of the analytical report for each sample report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980. Any opinions, if expressed, are outside the scope of the Laboratory's accredidation.

		Page 1
Sample Identification	Lab Number	Collection Date
W-15-MW03	05-A58615	4/18/05
W-15-MW02	05-A58616	4/18/05
W-15-MW01	05-A58617	4/18/05
W-14-MW04	05-A58618	4/18/05
TRIP BLANKS	05-A58619	4/18/05

Changed the collection date from the 19th to the 18th. Lowered the RL for MTBE.



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800-765-**@986 2**615-726-3404 Fax

Sample Identification

Lab Number Collection Date

These results relate only to the items tested. This report shall not be reproduced except in full and with permission of the laboratory. This is a re-issued report.

Report Approved By:

Report Date: 5/18/05
Revised Report Date

Johnny A. Mitchell, Laboratory Director Michael H. Dunn, M.S., Technical Director Pamela A. Langford, Senior Project Manager Eric S. Smith, QA/QC Director Gail A. Lage, Senior Project Manager Glenn L. Norton, Technical Services Kelly S. Comstock, Technical Services Roxanne L. Connor, Senior Project Manager

Laboratory Certification Number: 01168CA

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ANALYTICAL REPORT

ENVIRONMENTAL RESOLUTIONS, INC 10229

PAT TOELKES

20372 NORTH SEA CIRCLE LAKE FOREST, CA 92630

Project: ERI 3236 13

Project Name: EXXONMOBIL 18-LBF

Sampler: EDUARDO RIVERA

Lab Number: 05-A58615 Sample ID: W-15-MW03 Sample Type: Water Site ID: 18-LBF

Date Collected: 4/18/05 Time Collected: 9:39 Date Received: 4/22/05 Time Received: 8:10

Purchase Order: 4505826166 Limit of Limit of Dilution Parameter Result Flag Units Quantitation Detection Factor Date Time Method Analyst Batch -----------_____ **Volatile Organics **Ethyl-t-butylether <1.00 ug/l 1.00 0.27 1. 4/27/05 16:53 8260B B.Herford 1606 **tert-amyl methyl ether 2.30 ug/L 1.00 0.30 1.0 4/27/05 16:53 8260B B.Herford 1606 **Tertiary butyl alcohol 1350 ug/l 10.0 4.28 1.0 4/27/05 16:53 8260B B.Herford 1606

**Benzene 1.80 ug/l 0.50 0.25 1.0 4/27/05 16:53 8260B B.Herford 1606 **Ethylbenzene 6.30 ug/l 0.50 0.19 1.0 4/27/05 16:53 8260B B.Herford 1606 **Toluene 1606 <0.50 ug/l 0.50 0.17 1. 4/27/05 16:53 8260B B.Herford **Xylenes (Total) 5.50 ug/l 0.50 0.33 1.0 4/27/05 16:53 8260B B.Herford 1606 **Methyl-t-butyl ether 1180 ug/l 10.0 2.30 10.0 4/29/05 3:15 8260B A. Steimle 2627 Ethanol <200. 200. 30.7 1. 4/27/05 16:53 8260B uq/L B.Herford 1606 **Diisopropyl ether <1.00 ug/l 1.00 0.18 1. 4/27/05 16:53 8260/SA05-77 B.Herford 1606

**TPH-GC

**TPH (Gasoline Range) 834. ug/l 50.0 33.0 1.0 4/28/05 22:46 CA-LUFT A. Cobbs 816

Surrogate % Recovery Target Range _____ ------BTEX/GRO Surr., a,a,a-TFT 63. - 134. 74. VOA Surr 1,2-DCA-d4 100. 70. - 130. VOA Surr Toluene-d8 103. 78. - 121. VOA Surr, 4-BFB 126. 78. - 126. VOA Surr, DBFM 96. 79. - 122.



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ANALYTICAL REPORT

Laboratory Number: 05-A58615 Sample ID: W-15-MW03

Page 2

LABORATORY COMMENTS:

- ND = Not detected at the limit of Quantitation.
- U = Analyte analyzed for but not detected.
- # = Recovery outside Laboratory historical or method prescribed limits.
- ${\tt J}$ = All results evaluated to the Limit of Detection for reporting. Values below the Limit of Quantitation but above the Limit of Detection are qualified with ${\tt J}$ as estimated.
- B = Analyte was detected in the method blank.
- E = Estimated Value above the calibration limit of the instrument.



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ANALYTICAL REPORT

ENVIRONMENTAL RESOLUTIONS, INC 10229

PAT TOELKES

**Methyl-t-butyl ether

**Diisopropyl ether

**TPH-GC

Ethanol

20372 NORTH SEA CIRCLE LAKE FOREST, CA 92630

Project: ERI 3236 13

Project Name: EXXONMOBIL 18-LBF

91.8

<200.

<1.00

Sampler: EDUARDO RIVERA

Purchase Order: 4505826166

Lab Number: 05-A58616 Sample ID: W-15-MW02 Sample Type: Water Site ID: 18-LBF

Date Collected: 4/18/05 Time Collected: 10:00 Date Received: 4/22/05 Time Received: 8:10

4/28/05 14:58 8260B

4/28/05 14:58 8260B

4/28/05 14:58 8260/SA05-77 A. Steimle 2617

A. Steimle 2617

A. Steimle 2617

Limit of Limit of Dilution Parameter Result Flag Units Quantitation Detection Factor Date Time Method Analyst Batch ------**Volatile Organics **Ethyl-t-butylether <1.00 ug/l 1.00 0.27 4/28/05 14:58 8260B A. Steimle 2617 **tert-amyl methyl ether <1.00 ug/L 1.00 0.30 1. 4/28/05 14:58 8260B A. Steimle 2617 **Tertiary butyl alcohol 684. ug/l 10.0 4.28 1.0 4/28/05 14:58 8260B A. Steimle 2617 **Benzene <0.50 ug/l 0.50 0.25 1. 4/28/05 14:58 8260B A. Steimle 2617 **Ethylbenzene 0.60 ug/l 0.50 0.19 1.0 4/28/05 14:58 8260B A. Steimle 2617 A. Steimle 2617 **Toluene <0.50 ug/l 0.50 0.17 1. 4/28/05 14:58 8260B **Xylenes (Total) 0.71 ug/l 0.50 0.33 1.0 4/28/05 14:58 8260B A. Steimle 2617

**TPH (Gasoline Range) 92.4 ug/l 50.0 33.0 1.0 4/28/05 23:17 CA-LUFT A. Cobbs 816

0.23

30.7

0.18

1.0

1.

1.

Surrogate % Recovery Target Range ----------63. - 134. BTEX/GRO Surr., a,a,a-TFT 71. 70. - 130. VOA Surr 1,2-DCA-d4 97. VOA Surr Toluene-d8 102. 78. - 121. VOA Surr, 4-BFB 124. 78. - 126. VOA Surr, DBFM 79. - 122. 98.

ug/l

uq/L

ug/l

1.00

200.

1.00



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ANALYTICAL REPORT

Laboratory Number: 05-A58616 Sample ID: W-15-MW02

Page 2

LABORATORY COMMENTS:

- ND = Not detected at the limit of Quantitation.
- U = Analyte analyzed for but not detected.
- # = Recovery outside Laboratory historical or method prescribed limits.
- ${\tt J}$ = All results evaluated to the Limit of Detection for reporting. Values below the Limit of Quantitation but above the Limit of Detection are qualified with ${\tt J}$ as estimated.
- B = Analyte was detected in the method blank.
- ${\tt E}$ = Estimated Value above the calibration limit of the instrument.



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ANALYTICAL REPORT

ENVIRONMENTAL RESOLUTIONS, INC 10229

PAT TOELKES

20372 NORTH SEA CIRCLE LAKE FOREST, CA 92630

Project: ERI 3236 13

Project Name: EXXONMOBIL 18-LBF

Sampler: EDUARDO RIVERA

Purchase Order: 4505826166

Lab Number: 05-A58617 Sample ID: W-15-MW01 Sample Type: Water Site ID: 18-LBF

Date Collected: 4/18/05 Time Collected: 10:22 Date Received: 4/22/05 Time Received: 8:10

			Limit of	Limit of	Dilution					
Parameter	Result F	lag Units	Quantitation	Detection	Factor	Date	Time	Method	Analyst	Batch
									•	
**Volatile Organics										
~~ volacile olganics										
**Ethyl-t-butylether	1.20	ug/l	1.00	0.27	1.0	4/27/05	17:57	8260B	B.Herford	1606
**tert-amyl methyl ether	<1.00	ug/L	1.00	0.30	1.	4/27/05	17:57	8260B	B.Herford	1606
**Tertiary butyl alcohol	15600	ug/l	500.	214.	50.0	4/29/05	3:47	8260B	A. Steimle	2627
**Benzene	<0.50	ug/l	0.50	0.25	1.	4/27/05	17:57	8260B	B.Herford	1606
**Ethylbenzene	<0.50	ug/l	0.50	0.19	1.	4/27/05	17:57	8260B	B.Herford	1606
**Toluene	<0.50	ug/l	0.50	0.17	1.	4/27/05	17:57	8260B	B.Herford	1606
**Xylenes (Total)	0.63	ug/l	0.50	0.33	1.0	4/27/05	17:57	8260B	B.Herford	1606
**Methyl-t-butyl ether	164.	ug/l	1.00	0.23	1.0	4/27/05	17:57	8260B	B.Herford	1606
Ethanol	<200.	ug/L	200.	30.7	1.	4/27/05	17:57	8260B	B.Herford	1606
**Diisopropyl ether	<1.00	ug/l	1.00	0.18	1.	4/27/05	17:57	8260/SA05-77	B.Herford	1606

III GC										
**TPH (Gasoline Range)	440.	ug/l	50.0	33.0	1.0	4/28/05	23:48	CA-LUFT	A. Cobbs	816
**tert-amyl methyl ether **Tertiary butyl alcohol **Benzene **Ethylbenzene **Toluene **Xylenes (Total) **Methyl-t-butyl ether Ethanol **Diisopropyl ether **TPH-GC	<1.00 15600 <0.50 <0.50 <0.50 0.63 164. <200.	ug/L ug/l ug/l ug/l ug/l ug/l ug/L	1.00 500. 0.50 0.50 0.50 0.50 1.00 200.	0.30 214. 0.25 0.19 0.17 0.33 0.23 30.7	1. 50.0 1. 1. 1. 1.0 1.0 1.	4/27/05 4/29/05 4/27/05 4/27/05 4/27/05 4/27/05 4/27/05 4/27/05	17:57 3:47 17:57 17:57 17:57 17:57 17:57 17:57	8260B 8260B 8260B 8260B 8260B 8260B 8260B 8260B 8260/SA05-77	B.Herford A. Steimle B.Herford B.Herford B.Herford B.Herford B.Herford B.Herford B.Herford	1606 2627 1606 1606 1606 1606 1606

Surrogate	% Recovery	Target Range			
BTEX/GRO Surr., a,a,a-TFT	76.	63 134.			
VOA Surr 1,2-DCA-d4	98.	70 130.			
VOA Surr Toluene-d8	101.	78 121.			
VOA Surr, 4-BFB	117.	78 126.			
VOA Surr, DBFM	97.	79 122.			



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ANALYTICAL REPORT

Laboratory Number: 05-A58617 Sample ID: W-15-MW01

Page 2

LABORATORY COMMENTS:

- ND = Not detected at the limit of Quantitation.
- U = Analyte analyzed for but not detected.
- # = Recovery outside Laboratory historical or method prescribed limits.
- ${\tt J}$ = All results evaluated to the Limit of Detection for reporting. Values below the Limit of Quantitation but above the Limit of Detection are qualified with ${\tt J}$ as estimated.
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ANALYTICAL REPORT

ENVIRONMENTAL RESOLUTIONS, INC 10229

PAT TOELKES

20372 NORTH SEA CIRCLE LAKE FOREST, CA 92630

Project: ERI 3236 13

Project Name: EXXONMOBIL 18-LBF

Sampler: EDUARDO RIVERA

Purchase Order: 4505826166

Lab Number: 05-A58618 Sample ID: W-14-MW04 Sample Type: Water Site ID: 18-LBF

Date Collected: 4/18/05 Time Collected: 10:50 Date Received: 4/22/05 Time Received: 8:10

				Limit of	Limit of	Dilution					
Parameter	Result	Flag	Units	Quantitation	Detection	Factor	Date	Time	Method	Analyst	Batch
											-
**Volatile Organics											
**Ethyl-t-butylether	<1.00		ug/l	1.00	0.27	1.	4/27/05	18:29	8260B	B.Herford	1606
**tert-amyl methyl ether	3.30		ug/L	1.00	0.30	1.0	4/27/05	18:29	8260B	B.Herford	1606
**Tertiary butyl alcohol	981.		ug/l	10.0	4.28	1.0	4/27/05	18:29	8260B	B.Herford	1606
**Benzene	165.		ug/l	0.50	0.25	1.0	4/27/05	18:29	8260B	B.Herford	1606
**Ethylbenzene	200.		ug/l	0.50	0.19	1.0	4/27/05	18:29	8260B	B.Herford	1606
**Toluene	300.		ug/l	10.0	3.40	20.0	4/28/05	17:07	8260B	A. Steimle	2617
**Xylenes (Total)	1080		ug/l	10.0	6.60	20.0	4/28/05	17:07	8260B	A. Steimle	2617
**Methyl-t-butyl ether	3500		ug/l	20.0	4.60	20.0	4/28/05	17:07	8260B	A. Steimle	2617
Ethanol	<200.		ug/L	200.	30.7	1.	4/27/05	18:29	8260B	B.Herford	1606
**Diisopropyl ether	<1.00		ug/l	1.00	0.18	1.	4/27/05	18:29	8260/SA05-77	B.Herford	1606
**TPH-GC											
**TPH (Gasoline Range)	6180		ug/l	500.	330.	10.0	4/29/05	12:34	CA-LUFT	A. Cobbs	3900

Surrogate	% Recovery	Target Range
BTEX/GRO Surr., a,a,a-TFT	89.	63 134.
VOA Surr 1,2-DCA-d4	99.	70 130.
VOA Surr Toluene-d8	102.	78 121.
VOA Surr, 4-BFB	114.	78 126.
VOA Surr. DBFM	96 -	79 122.



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ANALYTICAL REPORT

Laboratory Number: 05-A58618

Sample ID: W-14-MW04

Page 2

LABORATORY COMMENTS:

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- E = Estimated Value above the calibration limit of the instrument.



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ANALYTICAL REPORT

ENVIRONMENTAL RESOLUTIONS, INC 10229

PAT TOELKES

20372 NORTH SEA CIRCLE LAKE FOREST, CA 92630 Lab Number: 05-A58619 Sample ID: TRIP BLANKS Sample Type: Water

Site ID: 18-LBF

Project: ERI 3236 13

Project Name: EXXONMOBIL 18-LBF

Sampler: EDUARDO RIVERA

Date Collected: 4/18/05

Time Collected:

Date Received: 4/22/05

Time Received: 8:10

Purchase Order: 4505826166

Parameter	Result	Flag	Units	Limit of Quantitation	Limit of Detection	Factor	Date	Time	Method	Analyst	Batch
**Volatile Organics											
**Ethyl-t-butylether	<1.00		ug/l	1.00	0.27	1.	4/27/05	16:21	8260B	B.Herford	1606
**tert-amyl methyl ether	<1.00		ug/L	1.00	0.30	1.	4/27/05	16:21	8260B	B.Herford	
**Tertiary butyl alcohol	<10.0		ug/l	10.0	4.28	1.	4/27/05	16:21	8260B	B.Herford	
**Benzene	<0.50		ug/l	0.50	0.25	1.	4/27/05	16:21	8260B	B.Herford	1606
**Ethylbenzene	<0.50		ug/l	0.50	0.19	1.	4/27/05	16:21	8260B	B.Herford	1606
**Toluene	<0.50		ug/l	0.50	0.17	1.	4/27/05	16:21	8260B	B.Herford	1606
**Xylenes (Total)	0.75		ug/l	0.50	0.33	1.0	4/27/05	16:21	8260B	B.Herford	1606
**Methyl-t-butyl ether	<1.00		ug/l	1.00	0.23	1.	4/27/05	16:21	8260B	B.Herford	1606
**Diisopropyl ether	<1.00		ug/l	1.00	0.18	1.	4/27/05	16:21	8260/SA05-77	B.Herford	1606
**TPH-GC											
**TPH (Gasoline Range)	<50.0		ug/l	50.0	33.0	1.	4/28/05	21:42	CA-LUFT	A. Cobbs	816
Surrogate				% Recovery	Та	rget Rang	e				
							-				
BTEX/GRO Surr., a,a,a	a-TFT			69.		63 13	4.				
VOA Surr 1,2-DCA-d4				99.		70 13					
VOA Surr Toluene-d8				102.		78 12	1.				
VOA Surr, 4-BFB				117.		78 12					
VOA Surr, DBFM				98.		79 12:					



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ANALYTICAL REPORT

Laboratory Number: 05-A58619 Sample ID: TRIP BLANKS

Page 2

LABORATORY COMMENTS:

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- # = Recovery outside Laboratory historical or method prescribed limits.
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- B = Analyte was detected in the method blank.
- E = Estimated Value above the calibration limit of the instrument.



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PROJECT QUALITY CONTROL DATA Project Number: ERI 3236 13

Page: 1

Matrix Spike Recovery

Analyte	units	Orig. Val.	MS Val	Spike Conc	Recovery	Target Range	Q.C. Batch Spike Sample
AAVOO ANALYOTOAA							
UST ANALYSIS TPH (Gasoline Range)	ma / 1	. 0 0500	0.026	1 00	0.4		
TPH (Gasoline Range)	mg/l	< 0.0500	0.936	1.00	94	43 150.	816 blank
BTEX/GRO Surr., a,a,a-TFT	mg/l	< 0.0500	0.942	1.00	94	43 150.	816 M:blank
BTEX/GRO Surr., a,a,a-TFT	% Recovery				95	63 134.	816
BIBA/GRO BUII., a,a,a-IFI	% Recovery				97	63 134.	816
	Matrix Spil	ke Recovery					
Analyte	units	Orig. Val.	MS Val	Spike Conc	Recovery	Target Range	Q.C. Batch Spike Sample
							
VOA PARAMETERS							
Benzene	mg/l	0.00180	0.0570	0.0500	110	62 143.	1606 58615
Benzene	mg/l	0.00180	0.0578	0.0500	112	62 143.	1606 M:58615
Benzene	mg/l	< 0.00025	0.0546	0.0500	109	62 143.	2617 BLANK
Benzene	mg/l	< 0.00025	0.0534	0.0500	107	62 143.	2617 M:BLANK
Toluene	mg/l	< 0.00050	0.0551	0.0500	110	63 141.	1606 58615
Toluene	mg/l	< 0.00050	0.0562	0.0500	112	63 141.	1606 M:58615
Toluene	mg/l	< 0.00017	0.0547	0.0500	109	63 141.	2617 BLANK
Toluene	mg/l	< 0.00017	0.0533	0.0500	107	63 141.	2617 M:BLANK
VOA Surr 1,2-DCA-d4	% Rec				103	70 130.	1606
VOA Surr 1,2-DCA-d4	% Rec				105	70 130.	1606
VOA Surr 1,2-DCA-d4	% Rec				94	70 130.	2617
VOA Surr 1,2-DCA-d4	% Rec				95	70 130.	2617
VOA Surr 1,2-DCA-d4	% Rec				95	70 130.	2627
VOA Surr 1,2-DCA-d4	% Rec				97	70 130.	2627
VOA Surr Toluene-d8	% Rec				101	78 121.	1606
VOA Surr Toluene-d8	% Rec				102	78 121.	1606
VOA Surr Toluene-d8	% Rec				101	78 121.	2617
VOA Surr Toluene-d8	% Rec				101	78 121.	2617
VOA Surr Toluene-d8	% Rec				101	78 121.	2627
VOA Surr Toluene-d8	% Rec				100	78 121.	2627
VOA Surr, 4-BFB	% Rec				105	78 126.	1606



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PROJECT QUALITY CONTROL DATA Project Number: ERI 3236 13 Page: 2

Matrix Spike Recovery

Analyte	units	Orig. Val.	MS Val	Spike Conc	Recovery		Q.C. Batch Spike Sample
VOA Surr, 4-BFB	% Rec				106	78 126.	1606
VOA Surr, 4-BFB	% Rec				102	78 126.	2617
VOA Surr, 4-BFB	% Rec				104	78 126.	2617
VOA Surr, 4-BFB	% Rec				106	78 126.	2627
VOA Surr, 4-BFB	% Rec				105	78 126.	2627
VOA Surr, DBFM	% Rec				99	79 122.	1606
VOA Surr, DBFM	% Rec				99	79 122.	1606
VOA Surr, DBFM	% Rec				99	79 122.	2617
VOA Surr, DBFM	% Rec				98	79 122.	2617
VOA Surr, DBFM	% Rec				100	79 122.	2627
VOA Surr, DBFM	% Rec				99	79 122.	2627
	Matrix Spike I	ouplicate					
Analyte	units	_	Duplicate		Limit	Q.C. Batch	
UST PARAMETERS							
TPH (Gasoline Range)	mg/l	0.936	0.942	0.64	27.	816	
BTEX/GRO Surr., a,a,a-TFT	% Recovery		97.			816	
	Matrix Spike D	uplicate					
Analyte	units	Orig. Val.	Duplicate	RPD	Limit	Q.C. Batch	
VOA PARAMETERS							
Benzene	mg/l	0.0570	0.0578	1.39	27.	1606	
Benzene	mg/l	0.0546	0.0534	2.22	27.	2617	
Toluene	mg/l	0.0551	0.0562	1.98	34.	1606	
Toluene	mg/l	0.0547	0.0533	2.59	34.	2617	



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PROJECT QUALITY CONTROL DATA Project Number: ERI 3236 13

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VOA Surr 1,2-DCA-d4	% Rec	105.	1606
VOA Surr 1,2-DCA-d4	% Rec	95.	2617
VOA Surr 1,2-DCA-d4	% Rec	97.	2627
VOA Surr Toluene-d8	% Rec	102.	1606
VOA Surr Toluene-d8	% Rec	101.	2617
VOA Surr Toluene-d8	% Rec	100.	2627
VOA Surr, 4-BFB	% Rec	106.	1606
VOA Surr, 4-BFB	% Rec	104.	2617
VOA Surr, 4-BFB	% Rec	105.	2627
VOA Surr, DBFM	% Rec	99.	1606
VOA Surr, DBFM	% Rec	98.	2617
VOA Surr, DBFM	% Rec	99.	2627

Laboratory Control Data

Analyte	units	Known Val.	Analyzed Val	% Recovery	Target Range	Q.C. Batch
UST PARAMETERS						
TPH (Gasoline Range)	mg/l	1.00	1.01	101	64 - 130	816
TPH (Gasoline Range)	mg/l	1.00	1.14	114	64 - 130	3900
BTEX/GRO Surr., a,a,a-TFT	% Recovery			97	63 - 134	816
BTEX/GRO Surr., a,a,a-TFT	% Recovery			115	63 - 134	3900

Laboratory Control Data

Analyte	units	Known Val.	Analyzed Val	% Recovery	Target Range	Q.C. Batch
VOA PARAMETERS						
Ethyl-t-butylether	mg/l	0.0500	0.0572	114	67 - 140	1606
Ethyl-t-butylether	mg/l	0.0500	0.0587	117	67 - 140	2617
tert-amyl methyl ether	mg/L	0.0500	0.0559	112	68 - 134	1606
tert-amyl methyl ether	mg/L	0.0500	0.0577	115	68 - 134	2617
Tertiary butyl alcohol	mg/l	0.500	0.649	130	28 - 182	1606
Tertiary butyl alcohol	mg/l	0.500	0.529	106	28 - 182	2617
Tertiary butyl alcohol	mg/l	0.500	0.578	116	28 - 182	2627
Benzene	mg/l	0.0500	0.0532	106	78 - 123	1606
Benzene	mg/l	0.0500	0.0567	113	78 - 123	2617



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PROJECT QUALITY CONTROL DATA Project Number: ERI 3236 13

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Laboratory Control Data

Analyte	units		Analyzed Val	% Recovery	Target Range	Q.C. Batch
Ethylbenzene	mg/1	0.0500	0.0550			
Ethylbenzene	mg/1	0.0500	0.0550	110	80 - 124	1606
Toluene	mg/l	0.0500	0.0600	120	80 - 124	2617
Toluene	•	0.0500	0.0534	107	77 - 124	1606
Xylenes (Total)	mg/l	0.0500	0.0572	114	77 - 124	2617
	mg/l	0.150	0.166	111	81 - 124	1606
Xylenes (Total)	mg/l	0.150	0.180	120	81 - 124	2617
Methyl-t-butyl ether	mg/l	0.0500	0.0535	107	69 - 136	1606
Methyl-t-butyl ether	mg/l	0.0500	0.0559	112	69 - 136	2617
Methyl-t-butyl ether	mg/l	0.0500	0.0559	112	69 - 136	2627
Ethanol	mg/L	5.00	6.42	128	48 - 164	1606
Ethanol	mg/L	5.00	5.71	114	48 - 164	2617
Diisopropyl ether	mg/l	0.0500	0.0578	116	65 - 140	1606
Diisopropyl ether	mg/l	0.0500	0.0590	118	65 - 140	2617
VOA Surr 1,2-DCA-d4	% Rec			95	70 - 130	1606
VOA Surr 1,2-DCA-d4	% Rec			94	70 - 130	2617
VOA Surr 1,2-DCA-d4	% Rec			94	70 - 130	
VOA Surr Toluene-d8	% Rec			102		2627
VOA Surr Toluene-d8	% Rec			102	78 - 121	1606
VOA Surr Toluene-d8	% Rec				78 - 121	2617
VOA Surr, 4-BFB	% Rec			100	78 - 121	2627
VOA Surr, 4-BFB	% Rec			105	78 - 126	1606
VOA Surr, 4-BFB	% Rec			102	78 - 126	2617
VOA Surr, DBFM				103	78 - 126	2627
VOA Surr, DBFM	% Rec			99	79 - 122	1606
•	% Rec			101	79 - 122	2617
VOA Surr, DBFM	% Rec			100	79 - 122	2627

Blank Data

Analyte	Blank Value	Units	Q.C. Batch	Date Analyzed	Time Analyzed
UST PARAMETERS TPH (Gasoline Range) TPH (Gasoline Range)	< 0.0500	mg/l	816	4/28/05	21:11
	< 0.0500	mg/l	3900	4/29/05	11:24



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PROJECT QUALITY CONTROL DATA Project Number: ERI 3236 13

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Blank Data

Analyte	Blank Value			Date Analyzed	Time Analyzed
UST PARAMETERS					
BTEX/GRO Surr., a,a,a-TFT	71.	% Recovery	816	4/28/05	21:11
BTEX/GRO Surr., a,a,a-TFT	82.	% Recovery	3900	4/29/05	11:24
	Blank Data				
Analyte	Blank Value	Units	Q.C. Batch	Date Analyzed	Time Analyzed
VOA PARAMETERS					
Think how a beauty		4.0			
Ethyl-t-butylether	< 0.00027	•	1606	4/27/05	11:32
Ethyl-t-butylether tert-amyl methyl ether	< 0.00027	mg/l	2617	4/28/05	13:52
tert-amyl methyl ether	< 0.00030		1606	4/27/05	11:32
Tertiary butyl alcohol	< 0.00030	•	2617	4/28/05	13:52
Tertiary butyl alcohol	< 0.00428	•	1606	4/27/05	11:32
Tertiary butyl alcohol	< 0.00428	mg/1	2617	4/28/05	13:52
Benzene	< 0.00428	mg/l	2627	4/29/05	2:43
Benzene	< 0.00025	5.	1606	4/27/05	11:32
	< 0.00025		2617	4/28/05	13:52
Ethylbenzene Ethylbenzene	< 0.00019	J.	1606	4/27/05	11:32
Toluene	< 0.00019		2617	4/28/05	13:52
Toluene	< 0.00017	•	1606	4/27/05	11:32
	< 0.00017	mg/l	2617	4/28/05	13:52
Xylenes (Total)	< 0.00033	mg/l	1606	4/27/05	11:32
Xylenes (Total)	0.00060	mg/l	2617	4/28/05	13:52
Methyl-t-butyl ether	< 0.00023	5.	1606	4/27/05	11:32
Methyl-t-butyl ether	< 0.00023	mg/l	2617	4/28/05	13:52
Methyl-t-butyl ether	< 0.00023	J.	2627	4/29/05	2:43
Ethanol	< 0.0307	mg/L	1606	4/27/05	11:32
Ethanol	< 0.0307	mg/L	2617	4/28/05	13:52
Diisopropyl ether	< 0.00018	mg/l	1606	4/27/05	11:32
Diisopropyl ether	< 0.00018	mg/l	2617	4/28/05	13:52



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PROJECT QUALITY CONTROL DATA Project Number: ERI 3236 13

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VOA Surr 1,2-DCA-d4	95.	% Rec	1606	4/27/05	11:32
VOA Surr 1,2-DCA-d4	96.	% Rec	2617	4/28/05	13:52
VOA Surr 1,2-DCA-d4	99.	% Rec	2627	4/29/05	2:43
VOA Surr Toluene-d8	102.	% Rec	1606	4/27/05	11:32
VOA Surr Toluene-d8	101.	% Rec	2617	4/28/05	13:52
VOA Surr Toluene-d8	101.	% Rec	2627	4/29/05	2:43
VOA Surr, 4-BFB	111.	% Rec	1606	4/27/05	11:32
VOA Surr, 4-BFB	109.	% Rec	2617	4/28/05	13:52
VOA Surr, 4-BFB	113.	% Rec	2627	4/29/05	2:43
VOA Surr, DBFM	95.	% Rec	1606	4/27/05	11:32
VOA Surr, DBFM	97.	% Rec	2617	4/28/05	13:52
VOA Surr, DBFM	97.	% Rec	2627	4/29/05	2:43

^{# =} Value outside Laboratory historical or method prescribed QC limits.



COOLER RECEIPT FORM

BC#



Client Name : ERI

C	ovier Received/Opened On: 4/22/05 Accessioned By: James I	J. Jacobs
	() () () () () () () () () ()	ام حرام
	Log-in Personnel Si	gnature
1.	Temperature of Cooler when triaged: Degrees Celsius	
2.	Were custody seals on outside of cooler?	YES)NONA
	a. If yes, how many and where:	
•		
3.	Were custody seals on containers?	NOYESNA
4.	Were the seals intact, signed, and dated correctly?	(YES)NONA
5.	Were custody papers inside cooler?	YES(NO).NA
6.	Were custody papers properly filled out (ink, signed, etc)?	YESNONA
7.	Did you sign the custody papers in the appropriate place?	(YES)NONA
8.	What kind of packing material used? (Bubblewrap) Peanuts Vermiculite	Other None
9.	Cooling process: Ice Ice-pack Ice (direct contact) Dry ice	Other None
	Did all containers arrive in good condition (unbroken)?	
	Were all container labels complete (#, date, signed, pres., etc)?	
12.	Did all container labels and tags agree with custody papers?	YESNONA
13.	Were correct containers used for the analysis requested?	YESNONA
14.	a. Were VOA vials received?	YES)NONA
	b. Was there any observable head space present in any VOA vial?	NO,YESNA
15.	Was sufficient amount of sample sent in each container?	YESNONA
	Were correct preservatives used?	\supseteq
	If not, record standard ID of preservative used here	
	•	
17.	Was residual chlorine present?	NOYESNA
18.	Indicate the Airbill Tracking Number (last 4 digits for Fedex only) and Name of Courier	below:
	<u>9357</u>	
(1	ed-Ex UPS Velocity DHL Route Off-street	Misc.
19.	If a Non-Conformance exists, see attached or comments below:	

NC Closed

Date Closed

Test/America

Sample NonConformance/COC Revision Form

Initiated by: Client Name:

Client Contact:

Client Account:

Date Created:

NC #:

JDJacobs

CASH SALE/ EXX

Sample Range:

Phone:

Not tagged

SDG:

Not tagged

8749 Analyst:

4/22/2005

71

Supervisor:

Paul Buckingham

NC Type:

NC Analytical 1

Project Name:

EXXONMOBIL 18-LBF

Terminal Manager:

Briggs

Project Number:

Project Origin

CA

Regulatory:

Process: No COC - Please Fax

COC sent in by client (via fax or email)

Corrected By:

Leah Klingensmith

414012

4/26/2005

V

Closed: ✓

Iklingensmith

Comments:

Comment added by: JDJacobs on 4/26/2005 11:38:13 AM

NC closed with out comments

Comment added by: Iklingensmith on 4/26/2005 11:35:34 AM

COC in bin.

We received 5 vials for W-15-MW01, W-15-MW02, W-15-MW03, W-14-MW04, and TB with no

COC.



External Nonconformance / Customer Inquiry

Initiated by: **Client Name:** Iklingensmith

ENVIRONMENTAL

Client Contact:

Gary Akers

Client Account: 10229

Date Created:

5/18/2005

Phone:

949-457-8944

58615-9

SDG:

414012

Analyst:

224

Supervisor:

Sample Range:

Mark Hollingsworth

Date Closed

NC Closed

5/18/2005

Process: Change Sample Collection Date/Time

Corrected By:

Leah Klingensmith

V

Report was amended and resubmitted

Closed:

Iklingensmith

Process: Alter Reporting Limits

Report was amended and resubmitted

Corrected By: Closed:

gail lage

Iklingensmith

Comments:

Action:

Action:

Comment added by: Iklingensmith on 5/18/2005 3:01:27 PM

NC closed with out comments

Comment added by: Iklingensmith on 5/18/2005 3:01:15 PM

Process Closed without Comment

Comment added by: Iklingensmith on 5/18/2005 8:54:41 AM

Revised report sent 5-18-05.

Comment added by: Iklingensmith on 5/18/2005 8:54:29 AM

Process Closed without Comment

For samples 58615-9, change the collection date to the 18th from the 19th. ERI(10229)

From: Gary N. Akers [mailto:gakers@ERI-US.com]

Sent: Tuesday, May 17, 2005 7:10 PM

To: Leah Klingensmith

Cc: Jamie Montefu; Birgit Haissig

Subject: 18LBF Importance: High

Leah,

Re: ERI 3236 (ExxonMobil 18LBF, lab project number 414012, dated 5/2/05),

The collection date on the cover sheet and the data sheets is incorrect. The actual collection

date is 4/18/05, not 4/19/05. What looks like a "19" on the COC is actually an "18."

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4 P1	Consultant Name:	Environn	nental Re	solut	ions,	Inc.												•		7.000E	_					10	neé	_		_	_				-
09:43AM	Address:	20372 N	orth Sea	Cirld	8			_												Invoice	_						TT(_		-
.; 33:	City/State/Zip:	Lake For	est, CA	9263	0												_	-		Report						_		005		<u></u>					-
	ExxonMobil Territory Mgr.	<u>Jeneé</u>	Briggs									_						-													11 1	21.0	2E		-
2005	Consultant Project Mgr:	PAT TO	DELKES	\$					-									-		acility												<u> </u>	<u> </u>		-
26	Consultant Telephone Number:	949-45	7-8950		- 7			c No	٠: <u>9</u>	49-	45	7-8	958	3	_			-		ite Add							ESE				<u></u>				_
Арг.	Sampler Name: (Print)				Ku	111	<u>C</u>											_	-	, State			_		_		_	_				_	_		_
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149190240		Date Sampled	rime Sampled	No. of Containers Shipped	Grab	Composite	Field Fillered	Methanol	Sodium Blavifate	HCI (Blue Label)	H.SO, Piestic (Yellow Label)	H,SO, Glass(Yellow Label)	HNO ₃ (Red I.abel)	None (Black Label)	Groundwater	Wastewater	Drinking Water Shudae	Soll	Other (specity):	8015M DIESEL- CAL LUFT	TPH/GAS-CAL LUFT	FULL SCAN 8260B	METHANOL -CAL LUFT	ETHANOL (8260)	*8260B/BTEX +OXYGENATES / GC/M8	BTEX/MTBE BY 8021	8010	REDOX POTENTIAL	NITRATE/SULFATE	METHANE(8015)	RUSH TAT (Pre-Schedule	6 Day TAT request	Fax Results (yes of 110)	Due Date of Report	
-71	Sample ID or Field ID	419 0		5	×		-	H	\dashv	x	\dagger	†	\vdash	Н	x	1	\dagger	1	Ħ		X			Х								X	Į	288)3	5
••	W-15-14W03	4750	1000		î				1	ît	\dagger	+	厂	П		1	\dagger	T			Y			1	X		T					\subseteq),	٤
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. AMERICA	Comments/Special Instructions: CONSULTANT ID # ERIL GLOBAL ID # T0603702234	*OXY	GENAT	ES TAI	WHE	TBA.			TE	DA	BC)VE				E E	MAI SHE	L A Are	UL E	DF FILE	S TO		Te Sa Ve	empe empl	erature e Con Free (Up taine of He	on R ers Ir eads	ntact pace	!? ⊵?	5	- C & &	•	N N		
FROM : TEST	Relinquished by: Relinquished by:	04/	Date	1	îme	<	zived	'n	(Lab	per)	2	en mb	<u> </u>	<u> </u>		t	Da Y S Da	te	+	Tim 8/0	e	Leve Leve Leve Site	42 43 44 Spec	áfic-it	5 D	AY KON Keek	TUI NMC	RN-	AR(L RI	EQI e-sci	UIR hect	LED ule v)	estAmer	rica

CLIENT NA	ME: EXXO	MOBIL 18L	<u>BF</u>	ERI JOI	B # 3236 13		0.163 FC	OR A 2" V	VELL
SITE LOCA	TION: 19248	VICTORY I	BLVD	ANALY	SIS: TPHg/	8260B		OR A 4" V	
		DATE: 4/18						OR A 6" V	
			DEPTH TO	CASE	CASE	PRG	1.10/1-0	I A U V	
WELL#	TIME	WATER	WELL	DIA	VOL(gal)	VOL	COND.	TEMP	-71
MW03	8:29 AM	15.17	37.94	4	14.86	42	COMD.	IEWIF	pΗ
	8:45 AM	1 1 1 1 1 1	07.01		14.00	1	1.95	65.5	6.9
	8:58 AM	<u> </u>			 	14	1.87	67.3	7.0
	9:16 AM		<u> </u>		+	28	1.90	69.9	6.9
	9:26 AM	15.35			<u> </u>	42	1.92	70.2	
sw	9:39 AM	10.00	 	 	 	42	1.92	70.2	6.9
	S water clear		ДЕРТН ТО	CASE	CASE	PRG	T		
WELL#	TIME	WATER	WELL	DIA	VOL	VOL	COMP	TEMO	
MW02	8:31 AM	15.46	39.82	4	15.90	45	COND.	TEMP	pН
	9:30 AM	10:10	00.02		13.30	1	1.97	67.7	6.0
 	9:39 AM				 	15	1.87	67.9	6.9
									7.0
						30	1 1 27		
	9:46 AM	15.62				30	1.87	68.0	
SW COMMENTS	9:46 AM 9:55 AM 10:00 AM	15.62				45 45	1.89	68.0	7.00
COMMENTS	9:46 AM 9:55 AM 10:00 AM Water clear		DEPTH TO	CASE	CASE				
COMMENTS WELL#	9:46 AM 9:55 AM 10:00 AM water clear	DEPTH TO WATER	DEPTH TO WELL	CASE DIA	CASE VOL	45			7.02
COMMENTS WELL#	9:46 AM 9:55 AM 10:00 AM water clear TIME 8:33 AM	ДЕРТН ТО				45 PRG	1.89	68.1	7.03
COMMENTS WELL#	9:46 AM 9:55 AM 10:00 AM water clear TIME 8:33 AM 9:57 AM	DEPTH TO WATER	WELL	DIA	VOL	PRG VOL	1.89	68.1	7.02 pH
COMMENTS WELL#	9:46 AM 9:55 AM 10:00 AM Water clear TIME 8:33 AM 9:57 AM 10:05 AM	DEPTH TO WATER	WELL	DIA	VOL	PRG VOL 30	1.89 COND.	68.1 TEMP	7.02 pH 6.97
COMMENTS WELL#	9:46 AM 9:55 AM 10:00 AM Water clear TIME 8:33 AM 9:57 AM 10:05 AM 10:10 AM	DEPTH TO WATER 15.56	WELL	DIA	VOL	PRG VOL 30	1.89 COND.	68.1 TEMP	pH 6.97
WELL #	9:46 AM 9:55 AM 10:00 AM Water clear TIME 8:33 AM 9:57 AM 10:05 AM 10:10 AM 10:15 AM	DEPTH TO WATER	WELL	DIA	VOL	PRG VOL 30 1	1.89 COND. 1.81 1.80	TEMP 67.7 69.0	pH 6.97 6.90 6.93
WELL # 1W01	9:46 AM 9:55 AM 10:00 AM Water clear TIME 8:33 AM 9:57 AM 10:05 AM 10:10 AM 10:15 AM 10:22 AM	DEPTH TO WATER 15.56	WELL	DIA	VOL	PRG VOL 30 1 10 20	1.89 COND. 1.81 1.80 1.84	TEMP 67.7 69.0 68.6	pH 6.97 6.90 6.93
COMMENTS	9:46 AM 9:55 AM 10:00 AM Water clear TIME 8:33 AM 9:57 AM 10:05 AM 10:10 AM 10:15 AM 10:22 AM	DEPTH TO WATER 15.56	WELL 31.99	DIA	VOL	PRG VOL 30 1 10 20	1.89 COND. 1.81 1.80 1.84	TEMP 67.7 69.0 68.6	pH 6.97 6.90 6.93
WELL # NW01 WELL # NW01	9:46 AM 9:55 AM 10:00 AM water clear TIME 8:33 AM 9:57 AM 10:05 AM 10:10 AM 10:15 AM water clear	DEPTH TO WATER 15.56	WELL 31.99 DEPTH TO	DIA	VOL	PRG VOL 30 1 10 20	1.89 COND. 1.81 1.80 1.84	TEMP 67.7 69.0 68.6	pH 6.97 6.90 6.93
WELL # WEOMMENTS WELL #	9:46 AM 9:55 AM 10:00 AM Water clear TIME 8:33 AM 9:57 AM 10:05 AM 10:10 AM 10:15 AM 10:22 AM	DEPTH TO WATER 15.56	WELL 31.99	DIA 4	VOL 10.7247	PRG VOL 30 1 10 20 30	1.89 COND. 1.81 1.80 1.84	TEMP 67.7 69.0 68.6	pH 6.97 6.90 6.93
WELL # WEOMMENTS WELL #	9:46 AM 9:55 AM 10:00 AM water clear TIME 8:33 AM 9:57 AM 10:05 AM 10:10 AM 10:15 AM water clear	DEPTH TO WATER 15.56 15.81 DEPTH TO	WELL 31.99 DEPTH TO	DIA 4	VOL 10.7247	PRG VOL 30 1 10 20 30	1.89 COND. 1.81 1.80 1.84 1.82	68.1 TEMP 67.7 69.0 68.6 69.1	pH 6.97 6.90 6.90
WELL # WOO WELL # WOW WELL #	9:46 AM 9:55 AM 10:00 AM Water clear TIME 8:33 AM 9:57 AM 10:05 AM 10:10 AM 10:15 AM water clear TIME 8:35 AM 10:19 AM	DEPTH TO WATER 15.56 15.81 DEPTH TO WATER	WELL 31.99 DEPTH TO WELL	DIA 4 CASE DIA	VOL 10.7247	PRG VOL 30 1 10 20 30 PRG VOL	1.89 COND. 1.81 1.80 1.84 1.82	68.1 TEMP 67.7 69.0 68.6 69.1	pH 6.97 6.90 6.90 6.90
WELL # WEOMMENTS WELL #	9:46 AM 9:55 AM 10:00 AM Water clear TIME 8:33 AM 9:57 AM 10:05 AM 10:10 AM 10:15 AM water clear TIME 8:35 AM 10:19 AM 10:26 AM	DEPTH TO WATER 15.56 15.81 DEPTH TO WATER	WELL 31.99 DEPTH TO WELL	DIA 4 CASE DIA	VOL 10.7247	PRG VOL 30 1 10 20 30 PRG VOL 45	1.89 COND. 1.81 1.80 1.84 1.82	68.1 TEMP 67.7 69.0 68.6 69.1	pH 6.97 6.90 6.90 pH
WELL # WELL # WOO WELL # WELL #	9:46 AM 9:55 AM 10:00 AM Water clear TIME 8:33 AM 9:57 AM 10:05 AM 10:10 AM 10:15 AM 10:22 AM water clear TIME 8:35 AM 10:19 AM 10:26 AM 10:26 AM 10:35 AM	DEPTH TO WATER 15.56 15.81 DEPTH TO WATER 14.79	WELL 31.99 DEPTH TO WELL	DIA 4 CASE DIA	VOL 10.7247	PRG VOL 30 1 10 20 30 PRG VOL 45	1.89 COND. 1.81 1.80 1.84 1.82 COND.	TEMP 67.7 69.0 68.6 69.1 TEMP	pH 6.97 6.90 6.90 6.90 pH 6.94 6.97
WELL # NW01 WELL # NW01	9:46 AM 9:55 AM 10:00 AM Water clear TIME 8:33 AM 9:57 AM 10:05 AM 10:10 AM 10:15 AM water clear TIME 8:35 AM 10:19 AM 10:26 AM	DEPTH TO WATER 15.56 15.81 DEPTH TO WATER	WELL 31.99 DEPTH TO WELL	DIA 4 CASE DIA	VOL 10.7247	PRG VOL 30 1 10 20 30 PRG VOL 45 1	1.89 COND. 1.81 1.80 1.84 1.82 COND. 1.83 1.80	TEMP 67.7 69.0 68.6 69.1 TEMP 68.6 68.9	pH 6.97 6.90 6.90

SOP-5 WELL SAMPLING & SURVEYING Rev 6/05

WELL SAMPLING AND SURVEYING

- 1) Open well heads. This may require a socket or a special Allen wrench.
- 2) If the wells are not surveyed by a licensed land surveyor, then survey the wells if this hasn't been done before as follows:
 - a) Select a permanent benchmark (e.g. curb at corner of site, property line). Record on "SURVEYGW" form.
 - b) Measure and record rectangular coordinates from benchmark to each well.
 - c) Set up tripod and transit where it can see all wells and the benchmark = Station "A".

 If you can't see all wells, two transit locations must be used. At least one well surveyed from Station "A" must be resurveyed from Station "B". Preferably, two or more wells are resurveyed.
 - d) Carefully level the tripod using the bubble indicator.
 - e) Place stadia rod on benchmark and record height from crosshair to reference, (D_o).
 - f) Place stadia rod on each well (at the notch) and record ht. from well to crosshair, (D_w).
 - g) Calculate casing elevation as shown on data sheet SURVEYGW.

To check the accuracy in leveling the transit, set the transit in second spot and repeat steps 2c through 2g. Recalculation of casing elevations should agree within 0.01 ft. or a third placement of the tripod will be required.

- 3) Set up a decon station. This consists of four (4) buckets. Fill the first with deionized water and one (1) teaspoon (approximately one cap full) of Liquinox soap. Fill the next three (3) buckets with deionized water. To decon a probe or water level indicator, place the element and the tape in the buckets in series, finishing with a good rise. To decon a pump, place the pump, hose and wire leads into the buckets in series, and circulate water through the pump in each bucket. Move the equipment from the dirtiest to cleanest bucket, rinsing thoroughly in each bucket.
- Decon the interface probe or water level indicator before inserting into each well. Review the historical groundwater concentrations and sample from cleanest well to hottest well, deconing between each well. Lower probe/indicator until it beeps raise and lower and mark the level on the tape with your thumb. Estimate level to the nearest 0.01 ft. Note the depth to free product if present as indicated by the interface probe and the depth to water on your field notes and log. Note any odor when the probe is withdrawn from the well. Look for the notch or ink mark on the top of the well and measure all levels from that. Notch should be on the highest side of the well pipe. If no side is high, notch should be on the north side. Measure from the casing adjacent to the notch not from the bottom of the notch. If there is no notch make one. For sites that have free product, or historically have had free product, use a bailer to remove a sample of the top of the water column and measure the product in the bailer or look for a sheen. Take a picture of any bailers with product after labeling the bailer with the well number.
- f there is free product, do not purge or sample. The presence of liquid phase hydrocarbons means the concentration in the water will be high anyway and the pump will be difficult to get clean enough to avoid contaminating other wells.
- 6) <u>Developing</u>: If the well has not been developed (it is new), surge the well by moving bailer up and down vigorously in the well for about 5 minutes. This will wash silt from the sand pack into the well where it can be removed.
- Pull out as much silt as possible by running the bailer all the way to the bottom and withdrawing. Continue bailing until water is fairly clear or until local regulatory specifications are met. Removal of silt with the bailer will extend the pump life. Contact the Project Manager if water does not clear up by 10 casing volumes.

- 8) Decon pump by washing in TSP/water the rinsing with tap water and rinsing again with deionized water. Then pump clean water through the pump to push out any dirty water.
- Purging: Place pump in well about 2 to 5 feet off bottom. Withdraw at least 3 casing volumes from the well, or until temperature, pH and conductivity stabilize (see local regulations). Be careful not to let the pump run dry. If an electric purging pump is used, such as a Grundfos pump, check the water level in the well with the water level indicator and slow pump down when water level is within 2 ft of the pump head. While purging, collect a water sample as often as possible and check for pH, conductivity, and temperature. Stable pH and conductivity would indicate the well has been filled with representative groundwater and purging is complete. If well recharges slowly, remove 1.5 casing volumes. Estimate flow rates by recording the time it takes to fill a 5-gallon bucket (1/2 of a 55-gallon barrel, etc.)
- 10) Decon pump thoroughly between each well by repeating step 7.
- Label bottles with a "Sharpie Pen" when they are dry. Label as W-xx-MWy, where xx is water depth below surface in feet and y is well number (refer to SOP-1).
- After the well has been developed, sample the water using a disposable bailer and surgical gloves to prevent oil from your hands from contaminating the sample. Be sure to leave no headspace or bubbles in any water sample to be tested for volatiles. Wells should be sampled within (24) hours of purging and the well should have recovered to within 80% of its volume before purging. (Slow recharge wells need to be addressed with the Project Manager and may have to be purged slowly). Gasoline contaminated water requires at least three (3) 40 ml VOA's from each well. Preserve samples by acidifying to pH <2 (usually with two drops of HCl). Water suspected of contamination with oil or diesel requires 2 1-liter samples in amber bottles. Samples contaminated with oil will require 10 drops of H₂SO₄ for preservation. Samples for organic lead require two (2) 1-liter amber bottles.
- Place like vials in a baggie and label the baggie. Put vials and baggie in an ice chest filled with ice and document samples and analyses required on a chain of custody. Take samples to the laboratory the same day samples are collected if possible, at least within 24 hours.
- 14) Clean wellhead gaskets (seals), put locking caps on the wells and replace the covers. Cover and label the drums (if any) of purge and decon water.

Analysis	<u>Bottles</u>	<u>Preservative</u>	
8015 mod gasoline/802 8015 mod diesel/8020(418.1 (TRPH) Organic Lead HOC - 8010 (601)		min. of 3 x 40 ml VOA 2 1-liter & 3 x 40 ml VOA 2 1-liter amber 2 1-liter amber min. of 3 x 40 ml VOA	2 drops HCl to pH <2 2 drops HCl to pH <2 (applied to VOA's) 10 drops H ₂ SO ₄ to pH <2 no preservative suggested no preservative suggested
Items Needed:			Items Needed for Surveying:
Water Level Indicator		Distilled Water	Topcon AT-F7 Transit
Disposable Bailers		4 Buckets	Tripod
Generator		Bottle Brush	Stadia Rod
Grundfos Pump and Re	eel	TSP Detergent	
Grundfos Pump Contro	l Box	Stainless Steel Cable or Poly	Rope
Hydac Cond/Temp/pH	Meter	Cooler with Ice	•
Liter Bottles		Socket set and Allen Wrench	(CNI Key)
VOAs		Plastic sheeting	•

SOP-6 Quarterly Well Monitoring Rev 6/05

QUARTERLY WELL MONITORING

- 1) Give the site manager advance notification of field activities. Arrange for a sufficient number of drums. Obtain a site plan with the location and ID's of the wells to be monitored and a copy of the table from the last quarterly report with the previous groundwater data.
- 2) Open well heads. This may require a socket or a special allen wrench.
- 3) Set up decon station per SOP-5. Measure groundwater depths with water level indicator as per SOP-5 before any other action is taken. If the depth to the bottom of the monitoring well is unknown, reel out the water level indicator until you feel the probe contact the bottom. You may have to raise and lower the probe several times to "feel" contact with the bottom. The probe is not very heavy, and the bottom of the well may have a cushioning layer of silt. Record the depth of the well once you feel confident the probe is at the bottom. Note odors from well.
- Calculate the linear footage of water in each well, by subtracting the depth to water from the total well depth. To obtain the casing volume in gallons, multiply the linear footage by a constant for the given well casing diameter. Typically, three casing volumes are purged from each well prior to sampling.

 Always Round up if 3.4 gallons, then purge 4 gallons if 12.1 gallons, then purge 13 gallons.

Casing diameter	Gallons per linear foot
2"	0.17
4"	0.66
6"	1.50
8"	2.60

- After measuring all water levels, begin purging the wells in order of the cleanest to the most contaminated based on last quarter's data. Well purging procedures are outlined in SOP-5. While wells containing free floating product may not be sampled, the project manager may want the free product removed manually by bailer. Check with the project manager before bailing LPH. You may find that for shallow wells, it may be quicker to bail manually rather than set up the pump. Place purge and decon water in a 55-gallon drum or treat on site. Do not mix purge water from different wells in one drum. Record all purge data on Groundwater Sampling Field Logs. Record "LPH" and the thickness in feet and inches (to nearest 1/16 of an inch) in the comments section if a measurable level of LPH present. If non-measurable amount present then record "Sheen" in the comments section.
- When the well has recovered at least 80% of its' original water level, collect samples using a clean, new disposable bailer. Use a new disposable bailer for each well. Make sure the rope or line is tied securely on the bailer, you don't want to go fishing. Sample in order of the cleanest to the most contaminated. If required, collect field (equipment) blanks.
- 7) Trip blanks are a QA/QC procedure that must be collected at every site. Obtain a trip blank from the laboratory. They will make them up for you. The trip blank to taken unopened to the site and is kept with the other samples in the cooler unopened during the day's sampling. Label the bottle as an arbitrary monitoring well. For example: if there are 5 monitoring wells to be sampled at the site, the trip blank should be labeled as if it were a sample from MW6. The trip blank is never opened and it is used to determine if any contaminants are introduced by the laboratory or during transportation of the samples.
- Field (equipment) blanks are a QA/QC procedure to be collected at the project manager's discretion (or always for LACDPW sites). To collect a field blank decon a bailer thoroughly; pour distilled water into the bailer; pour the distilled water from the bailer into appropriate sample bottle(s) for the analysis

to be performed, allow for no headspace; label the bottle as an arbitrary monitoring well. For example: if there are 5 monitoring wells to be sampled at the site plus a trip blank, and a field blank is to collected, the field blank should be labeled as if it were a sample from MW7 (the trip blank is MW6). If a disposable bailer is used for sampling, use a new disposable bailer to collect the field blank.

- 9) Label sample containers when they are dry (refer to SOP-1). Place vials from each well in a separate plastic zip lock bag. Put bag in an ice chest and document samples and analyses required on a chain of custody (see attached examples).
- Replace the locking caps, and the covers. Cover and label the drums of waste water. Place the drums on site in a location selected by the site manager. Usually, this will be near a dumpster or in the back, away from public view. Labels should face outward.
- 11) Decon all equipment per SOP-5 before leaving the site.

In general, groundwater sampling will be performed in accordance with LUFT guidelines. Several local agencies require that groundwater sampling occur under slightly different guidelines. Check with the project manager to find out which sites require special groundwater sampling procedures. Typically, the following apply:

Orange County Health Care Agency Requirements

No special requirements. Water sampling will be performed as per the State Water Resources Board's LUFT manual.

LARWQCB Groundwater Requirements

- Purge a minimum of three well volumes if recovery is fast, or one borehole volume if recovery is slow (water does not recover to 80% of original level within two hours).
- The last three readings must be within 10% for conductivity, temperature, and pH to show stabilization. This means that all three consecutive readings must be within these limits the first with the middle, and the first with the last, and the middle with the last. For instance, pH readings of 6.92, 6.95, and 7.00 would be sufficient.
- Even though there are no guidelines for turbidity, the measurements should be less than 10 NTU, or meet the baseline level established during development, upon completion of purging. Check with project manager if you use the baseline turbidity level.
- Prior to sampling document recovery time by measuring the water level in each well to prove that at least 80% recovery has occurred.
- A trip blank must be collected.
- o In the comments column of the chain of custody, write "Prepare laboratory report in WIP format."

San Diego Department of Health Services Groundwater Sampling Requirements

- SDDHS does not encourage purging wells until dry.
- Purge one borehole volume of water if recovery is fast, collecting pH/temperature/conductivity measurements while purging, then remove an additional one-half borehole volume of water. If the first and second measurements vary by less than 10%, purging is considered adequate. If not, keep purging water in one-half borehole volume increments until the measurements vary by less than 10%,

or three borehole volumes have been removed. Obtain three consecutive pH/temperature/conductivity measurements that are within 10% of each other.

- If recovery is slow (water does not recover to 80% of original level within two hours) purge only one borehole volume of water.
- Prior to sampling document recovery time by measuring the water level in each well to prove that at least 80% recovery has occurred.

Ventura County Environmental Health Division Groundwater Sampling Requirements

- A trip blank and a duplicate sample must be analyzed for each site.
- Custody seals must be place over the cap of each sample.

Under certain conditions the calculated purge volumes will need to be calculated in borehole volumes instead of well casings volumes. Use the following to calculate borehole volume in gallons.

Well I.D.
2"
0.90 gal/ft. in water
4"/or nested wells
1.70 gal/ft. in water

The completed groundwater sampling log must contain:

- pH/temp./conductivity and turbidity measurements indicating stabilization

- time and volume of water removed at each pH/temp./conductivity measurements

- total volume of water purged

name of personnel performing sampling

date and project number

- problems or unusual conditions arising during purging or sampling, such as the well going dry during

purging, water in the well vault, missing well caps or locks, odors, appearance of purge water, etc.

- 80% recovery measurement and time of measurement after purging and before sampling

All chains of custody for the client's groundwater sites must contain the consultant work release number, station identification number and client contact among the other items to be filled out. Check the groundwater sampling field log and chain of custody for completeness, accuracy and neatness. If you have any questions, call!!!

Make sure that the date and time of relinquished and accepted at the lab are the same on the chain of custody. Also, make sure the lab fills in the sample condition information and signs for the samples on the chain of custody

Santa Barbara County Environmental Health Services Groundwater Monitoring Guidelines

I. Groundwater Monitoring

- A. Groundwater levels are to be monitored/measured in all wells in a short time span.
- B. Measure the groundwater levels (correct for "free product" thickness).
- C. Use a clear bailer to check for the presence of "floating product," sheen, and odors.
- D. Replace well cover until ready to purge well.

Purging

A. Amount: generally 3 to 5 (no more than 10) well volumes; via bailer, pumps, or vacuum truck.

- B. Parameters (pH, temperature, conductivity) shall stabilize while purging.
 - 1. Measure the parameters of a small volume (i.e., a 500 ml) of the water as it is removed from the well. Measure the parameters initially and at regular volume intervals (e.g., after every well casing volume). More frequent testing may be needed if the well is known to go dry.
 - 2. Wells must be allowed to recharge prior to sampling (see section G of the Santa Barbara County LUFT Manual).
- C. Slow recharging wells are wells that are purged dry before removing 3 well volumes of water, and take more than **two (2)** hours to recharge.
 - 1. Note this on the field records and estimate the number of well volumes removed.
 - 2. Allow the well to recharge a minimum of two (2) feet and then sample.
 - 3. Sample wells no later than 24 hours after purging.
 - 4. Note the water level and percentage of recharge in the report.

III. Sample Collection

- A. Use either a decontaminated Teflon, stainless steel, or disposable bailer.
- B. Sample containers are to be supplied and certified by a laboratory:
 - 1. VOAs of 40 ml volume (at least 3 per well check with lab and the PM for specific requirements); fill VOAs first to reduce volatization.
 - 2. 4 oz sample containers for Pb (metallic lead) analysis (if needed).
- C. Fill containers by pouring along the inside of the vial to reduce volatilization.
- D. Form a positive meniscus with the water, to avoid trapping air, before placing the cap on the VOA. Samples with headspace are not acceptable for analysis.
 - 1. Check for bubbles by inverting and tapping gently to dislodge bubbles.
 - 2. If bubbles are found, uncap and repeat steps C and D.
- E. Label all samples and store immediately in an ice chest at 4 degrees Celsius filled with ice.
- F. Be careful to properly decontaminate equipment between each and every well.

NON-HAZARDOUS WASTE MANIFEST	1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of									
3. Generator's Name and Mailing Address	· · · · · · · · · · · · · · · · · · ·											
Waste Administration Coordinator EnconMobil GR Waste Management Gro	Jen eé Briggs											
5. Transporter 1 Company Name	Room 919A Houston, TX 77060 6. US EPA	ID Number	A. Transporter's Phone									
Environmental Resolutions Inc.	<u> </u>											
7. Transporter 2 Company Name	1	ID Number	(949) 457-8950 B. Transporter's Phone									
Belshire Environmental/Nieto and Sons 9. Designated Facility Name and Site Address	10. US EPA	ID Number	C. Facility's Phone									
Crosby and Overton 1610 West 17th. Street Long Beach, CA			(582) 432-5445									
11. Waste Shipping Name and Description			12. (Containers	13.	14.						
	·		No.	Туре	Total Quantity	Unit Wt/Vol						
a.												
Non-Hazardous Waste Liquid Not Regula	ited by D.O.T.		.00	11 11	. 140	G						
G b.						 						
E N												
G b. E N C c.			- -	· · ·	• • • •	<u> </u>						
C.												
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d.												
D. Additional Descriptions for Materials Listed Abo	ove		E. Handling C	ndes for W	astes Listed Above							
11A) P10A, C1 # 30	nt 9					-						
				15)							
Purged Groundwater		**	,									
15. Special Handling Instructions and Additional I	nformation		<u> </u>		······································							
[]												
ERI 3236-13												
ExconMobil 18LBF												
19248 Victory Blvd, Reseda, CA.												
16. GENERATOR'S CERTIFICATION: I certify the n	notorials described above on this manifest and											
Printed/Typed Name	Signature	not subject to rederat re	Julations for report	ing proper d	isposal of Hazardous Month Day							
Gary De Carlo of ERI on behalf of Exconit		LO acel	_		01 26	05						
17. Transporter 1 Acknowledgement of Receipt of												
Printed/Typed Name	Signature	TATA			Month Day	Year						
Gary De Carlo of ERI on behalf of Exxonit		and			01 26	05						
18. Transporter 2 Acknowledgement of Receipt of a Printed/Typed Name	Naterials Signature											
Lyptlores	Signature	upe =			Month Day	Year とし・}						
19. Discrepancy Indication Space		<i>y</i>				1						
=	•											
20. Facility Owner or Operator: Certification of rec	eipt of waste materials covered by this	manifest except as note	d in Item 10									
Printed/Typed Name	Signature	/	- J+ 1		Month Day	Year						
FINTONIO 1	70	16:/-) z_	0.4 02	105						

ORIGINAL - RETURN TO GENERATOR